Regarding the anticipation rejection of independent claims 2 and 3 based on Richardson, this reference does not disclose or suggest the determining unit of amended claim 2 or 3. In particular, Richardson does not teach or even suggest a device that determines the proportions of the types of muscles in measured portions of a subject based on an amplitude and a frequency derived from a measured mechanomyogram, as required by claims 2 and 3. The Office Action contends, at page 3, that Richardson teaches "determining the muscular force utilized by analyzing amplitudes and average frequency". However, there is no support offered for this contention by the Examiner, and no such support exists in Richardson.

Furthermore, Richardson does not disclose or even suggest the recited calculation unit of claims 2 and 3, which calculates a muscle volume between portions to be measured of a subject. The Office Action points out Richardson teaches a processing/calculation unit (5) for calculating muscle volume and maximum voluntary contraction based on individual input and measured bioelectric impedance. However, the claimed calculation unit calculates a muscle volume *between portions to be measured*, not a "muscle volume" as taught by Richardson. The claimed calculation unit calculates a maximum voluntary contraction based on the calculated muscle volume, not based on individual input and measured bioelectric impedance, as taught by Richardson. Since Richardson's processing/calculation unit uses "individual input", it cannot solve the problem of the prior art, discussed at page 3 of the present application and addressed by the claimed invention, of inaccurate strength measurements due to subjective factors.

Thus, Richardson does not anticipate independent claims 2 or 3, because it does not disclose each and every element of those claims. In particular, Richardson does not disclose the recited calculation unit of claims 2 and 3, which calculates a muscle volume between portions to be measured of a subject. Additionally, Richardson does not disclose the determining unit of amended claim 2 or 3, which makes a determination of the proportions of muscle types in the measured portions based on the amplitude and frequency derived from a measured mechanomyogram in which the amplitude decreases while the frequency increases when the subject does exercise with respect to a load. Moreover, it would not have been obvious to modify the apparatus of Richardson to include the determining unit or calculation unit of claims 2 or 3.

At paragraphs 14 and 15 of the Office Action, it is contended that the recitation of the claimed determining unit in independent claims 2 and 3 is either a product-by-process limitation which adds no patentable distinction to the claim, or is an intended use limitation. Applicants are unsure why the Examiner is advancing these tortured interpretations of relatively straightforward functional claim language. Nevertheless, as explained immediately below, these interpretations are both incorrect.

Regarding the contention, at paragraph 14 of the Office Action, that the recitation of the determining unit in claims 2 and 3 is a product-by-process limitation, there is no legal or logical basis for such an interpretation, and none is offered in the Office Action. The claimed determining unit is written using customary functional language, specifying that proportions of muscles of a subject are determined based on specified parameters (i.e., amplitude and frequency derived from a particular type of measured mechanomyogram). The Office Action does not analyze the claim in any detail, so Applicants are unsure of the reasoning behind the Examiner's contention. However, even assuming, ***arguendo***, that the Examiner's interpretation is correct, claims 2 and 3 are patentable over Richardson, because Richardson does not produce the same "product" as the claimed inventions. It cannot because, as discussed above, Richardson does not disclose or suggest determining the proportions of muscle types in measured portions of a subject based on the amplitude and frequency derived from a measured mechanomyogram.

Regarding the contention, in paragraph 15 of the Office Action, that the recited functions of the determining unit of claims 2 and 3 are "intended use" limitations, Applicants disagree with the Examiner's characterization of these claim terms. The claimed determining unit is recited using conventional functional language. In particular, the determining unit is explicitly required to perform two functions: to measure a mechanomyogram of the subject, and to determine the proportions of certain muscles based on specific data. This claim language is clearly proper under Patent Office rules, and is deserving of patentable weight because it limits the structure of the determining unit; i.e., to one having a structure that can perform those functions. The Examiner has no basis for categorizing these limitations as mere intended use limitations.

Even assuming, ***arguendo***, the Examiner's "intended use" analysis is correct, Richardson does not anticipate claims 2 and 3, because the recitation of the alleged intended use of the determining unit results in a structural difference between the claimed invention and Richardson. In other words, Richardson's structure is not capable of performing the alleged intended use of the claimed determining unit. As discussed hereinabove, Richardson's device cannot be used to determine the proportions of types of muscles based on an amplitude and a frequency derived from the measured mechanomyogram. To perform this use, Richardson's processor 5 would have to include, for example, programming or hard wiring expressing formulas or algorithms to determine the claimed muscle proportions based on the recited amplitude and frequency data. There is no evidence that Richardson's device includes such programming or hard wiring, or utilizes such algorithms, so it cannot be used as the claimed device.

Consequently, independent claims 2 and 3 are patentable, as is claim 4, which depends from claim 2 or 3.

Regarding the obviousness rejection of claims 5-8 based on Richardson and Moss, the Moss reference does not disclose or suggest an apparatus having the above-discussed calculation unit or determining unit of amended claims 2 and 3. Thus, Moss does not furnish the features of independent claims 2 and 3, from which claims 5-8 depend, missing from Richardson. Therefore, any combination of Richardson and Moss would be missing the claimed calculation unit and the determining unit of claims 2 and 3, and it would not have been obvious to add these features to any Richardson/Moss combination.

Consequently, claims 5-8 are patentable.

Accordingly, it is believed that all pending claims are now in condition for allowance. Applicants therefore respectfully request an early and favorable reconsideration and allowance of this application. If there are any outstanding issues which might be resolved by an interview or an Examiner's amendment, the Examiner is invited to call Applicants' representative at the telephone number shown below.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

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